

REMARKS

Claims 10-17 are pending in the present application. Claims 10, 14 and 16 have been amended. Reconsideration of the rejections of the claims is respectfully requested in view of the Amendment and the following comments.

I. Rejection under 35 USC 112, Second Paragraph

Claims 10-17 have been rejected under Section 112, second paragraph as failing to distinctly claim the invention. In particular, the Office Action points to the feature added in the previous amendment as being unclear. Applicant has amended independent claims 10, 14, and 16 to recite a space transformer including double-sided electrical contacts, land grid array contacts having a dimensions and spacing less than the semiconductor side contacts. In view of this amendment, reconsideration and withdrawal of the rejection of claims 10-17 under 35 USC 112, second paragraph is respectfully requested.

II. Rejections under 35 USC 103(a)

Claims 10-12, 14 and 16 have been rejected under Section 103(a) as being unpatentable over Van Pham et al. U.S. Patent No. 6,303,992 (“Van”) in view of Eldridge et al., U.S. Patent No. 5,974,662 (“Eldrige”). Claims 13 and 15 were rejected under 35 USC 103(a) as being unpatentable over Van and Eldridge in view of Petrarca et al., U.S. Patent No. 6,429,522 (“Petrarca”) and Matsuo et al., U.S. Patent No. 6,614,106 (“Matsuo”). Reconsideration is respectfully requested in view of the following comments.

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As stated previously, Van does not disclose the structure of a space transformer, but instead refers to an interposer having a structure that is not designed to convert a micro pitch scale to a macro pitch scale as described in embodiments of the present invention. The claims have been amended to bring out this feature by stating that the land grid array side contacts have dimensions and spacing less than the semiconductor side contacts. Such a feature is clearly missing from Van. The Office Action points to Fig. 4, but this Figure does not accurately reflect the dimensions and spacing of the contacts. Indeed, looking at Figs. 3A and 3B of Van, it is readily apparent that contacts 20 have dimensions and spacing that are much larger than contacts 18.

Eldridge does not make up for the deficiencies of Van. The space transformer described therein would be of a type described in the background section of the present application. The space transformer of Eldridge is made of interleaved layers of insulating materials (e.g., ceramic) and conductive material (See Fig. 4 and Col. 23, lines 1-5). Nowhere in Eldridge is a space transformer described that is made of a silicon medium or silicon layers as recited in the claims. Since Van does not describe a space transformer at all, there is no suggestion in Van or Eldridge to combine these references in a manner to achieve the presently claimed invention. Indeed, the only support for combining the space transformer of Eldridge with the silicon material of Van, would be the present patent application.

Petrarca and Matsuo have been cited for its disclosure of an adhesion promoter. These references, however, fail to make up for the deficiencies of the Van and Eldridge references.

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Accordingly, it is submitted that claims 10-17 are patentable over the cited combination of references. In view of the same, the Examiner is respectfully requested to reconsider and withdraw his rejection of the claims under Section 103(a).

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CONCLUSION

In view of the foregoing amendments and remarks, the Applicants earnestly solicit issuance of a Notice of Allowance for claims 10-17.

The Examiner is invited to contact the undersigned at (202) 220-4255 to discuss any matter concerning this application.

No additional fees are believed to be required in connection with this submission. Nonetheless, the Applicants authorize payment of any additional fees under 37 C.F.R. § 1.16 or § 1.17 or credit of any overpayment to Deposit Account No. 11-0600.

Respectfully submitted,

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